

**Communication Expert** 

of Industrial IOT

8

Quick Operating Manual

# USR-EG628

## **Industrial Mini PC**

Linux Ubuntu OS, Network Management Edge Computing, Built-in Configuration PLC Programming, 4G/Dual WiFi/Ethernet

Be Honest & Do Best

Your Trustworthy Smart Industrial IoT Partner

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## **1.Product Introduction**

The USR-EG628 is a comprehensive expandable ARM industrial computer. It supports secondary development based on the Linux Ubuntu system and integrates WukongEdge applications, combining edge gateway, local configuration, and PLC programming functions. With IO expansion capabilities, it delivers powerful performance.

#### **Hardware Specifications**

**Chip:** RK3562J industrial-grade chip, 4-core 64-bit high-performance ARM CPU (2.0GHz main frequency), featuring an integrated AI Neural Processing Unit (NPU) with 1.0TOPS computing power and support for multiple AI development tools/APIs.

**Connectivity:** Built-in cellular 4G, dual Ethernet ports, and Wi-Fi. External interfaces include serial ports, USB 3.0, HDMI, and IO module expansion ports (supporting AI/AO/DI/DO modules).

**Installation:** DIN rail and wall-mount brackets for easy setup.

## 2.Package

**Packaging:** Neutral packaging with a small label (SN and model for inventory tracking).

**Contents:** Device and accessories (see accessories list).



Model	Accessories	Network
USR-EG628 (ETH)	Power cable, Ethernet, RTC battery	Ethernet
USR-EG628 (GL)	4G/WiFi/GPS antennas, power cable, Ethernet, RTC battery	4G (Global Version)

# **3.Quick Testing**

## 3.1. Hardware Connection

1. Connect the power adapter (red=positive, black=negative).



2、 Remove the side plastic cover, install the RTC coin battery, and reattach the cover.



3、Insert the SIM card.



- 4、Attach 4G/Wi-Fi antennas and GPS antenna (GL version only).
- 5、Use WAN port for router connection, LAN port for direct PC connection; configure PC to obtain IP via DHCP.
- 6、Power on the device and verify the PW (Power light) is steady and WK (System light) is blinking.

### 3.2. Login WEB

- **Direct PC Connection:** Connect the PC's network port to the device's LAN port, set the PC to obtain an IP address automatically
- 1、Power on, verify the WK indicator is blinking, then enter the LAN IP into a browser Default IP of LAN Port: 192.168.1.1
- 2、Login with default username & password (admin/admin)
- 3、Check device basic info and network status (e.g., 4G) in the overview.

<b>WukongE</b>	dge 😳 Overview	[·] Network	Edge Computing	🕞 System Management				8) 📾 mit 😡
System Info Name: Model: Version: App Version: App Device:	EG628 USR-EG628-GL V1 0.08.00000 0000 V1.2.17.00000 0000 WukongEdge	SN: MAC-1: MAC-2: IMEI: Device Time:	03200625039400000331 D4 AD 20 BB 4A 27 D4 AD 20 BB 4A 28 B60387060525418 2025-03-11 11 43 44	Link-1: Disconnecte Link-2: Disconnecte NodeRed: OFF OS: Linux Runtime: 00.36.13	<u>Settings</u> d	Flow Usage Monitoring Data Usage(Day): Alarm value(Day): Data Usage(Month): Alarm value(Month):	Settings     0.03MB   0 0MB   N 0.03MB   F 0MB   F	Performance
WAN Mode: WAN IP: Netmask: Gateway:	DHCP 192 108 11.75 255 255 255 0 192 188 11.1	Settings	Ethernet Port J Mode: WAN Status: Connected	Satings	Wireless Status: IP: Netmask: Gateway:	Connected 192.168.10.57 255.255.255.0 182.168.10.1	Cellular Status: Active SIM: Network Type Signal Level:	Settings Networking success SIM2 : FDD-LTE(4G) 29
DNS-1: DNS-2: LAN LAN IP: Netmask: DHCP Servio	119.29.29 8.8.8 8 192.168.1.1 255.255.255.0 ••: ON	Settings	Mode: LAN Status: Disconnect Location Longitude: +117.0094 Latitude: +36.66639 Status: A	ed 13	SSID: MAC: Signal: Receiving Rat Transmission Rate:	产品部 dc 2e 97 a2 41:16  e: 2 29 KB/s 0.00 KB/s	Signal: Connection T ICCID: IP Address: Netmask: DNS-1: DNS-2: TACI ACI:	-56dBm me: 00.35.30 899800361523CA063896 10.12.28.149 255.255.2552 211.137.191.27 218.201.96.131 539F
			Satellite: 11				Cell ID:	эже. 88812E1

#### • Configure Parameters via Built-in Desktop

- 1、Connect mouse & keyboard via USB, and the screen via HDMI. For others, refer to 3.1.
- 2、Power on, once the Work indicator starts blinking and the display shows the desktop, perform the operations. As shown in the following figure:



3、Open Chromium Browser on the desktop and enter the LAN port IP (default: 192.168.1.1)

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<ul> <li>Ø 192.168.1.1/#/login x +</li> <li>← → C ▲ Not secure   192.168.1.1/#/login</li> </ul>		, - * × ≈ q < ☆) ▲ □ ▲ ::	
You are using an unsupported command-line flag: -no-sandbox. Stability and security will suffer.		×	
	Welcome to Login		
	Account		
CONNECTING VALUE	Please enter account name		
VALUABLE CONNECTION	Password Please enter password		
A CONTRACTOR AND A CONTRACT OF A CONTRACT	Login		
		-	•

- 4. Login with default Account & Password (admin/admin)
- 5. View device information and network status (e.g., 4G) in the overview.

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VAN     Settern       VAN     Settern       Mode:     DI-CP       WAN IP:     12:10:11.75       Netmask:     25:255.255.0       Gateway:     19:10:81.11.75       DNS-1:     19:21:20:10.11.75       DNS-1:     19:21:20:10.10.57       DNS-1:     19:21:20:10.10.57       DNS-1:     19:21:20:10.10.57       DNS-1:     19:21:20:10.10.57       DNS-1:     19:21:20:10.10.57       Network Type: ···     Status:       Status:     Connected       Status:     Disconnected       Status:     Disconnected       Status:     Disconnected       Status:     Disconnected       Status:     Disconnected	App Device:	WukongEdge	Device Time:	2025-03-11 12:15:17	Runtime: 00:09:45		DOM	-	
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WAN IP:         192.188.11.75         Status:         Connected         IP:         192.188.10.57         Active SiM1         Image: Similar and Sim	Mode:	DHCP		Mode: WAN	s	tatus: Connected	Status: netw	orking	
Netmask:         255,255,255.0         Network Type:            Gateway:         192,166,11.1         Ethernet Port 2         Gateway:         192,168,10.1         Signal Level:            DNS-1:         119,26,20.29         Mode:         LAN         SSID:         ////////////////////////////////////	WAN IP:	192.168.11.75		Status: Connected	15	192.168.10.57	Active SIM: SIM:	D	
Gateway:         192 168 111         Ethemet Port 2         Gateway:         192 168 10.1         Signal Level:            DNS-1:         119 29 38 29         Mode:         LAN         SSID:         PESS         Signal:            DNS-2:         8.8.8         Statust:         Disconnection         Octometion         Octometion         Time:            I LAN         Sentos         I         Becalvine         Becalvine	Netmask:	255.255.255.0			N	etmask: 255.255.255.0	Network Type:		
DNS-1:         119.29.29 29         Mode:         LN         SSID:         PBS         Signat:            DNS-2:         8.8.8         Status:         Disconnected         MAC:         d:2x:97.241.16         Connection no 000.00 mm         Image:	Gateway:	192 168 11 1		Ethernet Port 2	G	ateway: 192.168.10.1	Signal Level:		
DNS-2:         8.8.8.8         Status:         Disconnected         MAC:         dc:2e 97.a241.86         Connection 00.00.00           1 LAN         Sectors         I         Becalvins         ICCID:          ICCID:	DNS-1:	119.29.29.29		Mode: LAN	s	SID: 产品部	Signal:		30.
Signal: ICOD:	DNS-2:	8.8.8		Status: Disconnect	ed N	AC: dc:2e:97:a2:41:16	Connection 00:0	0:00	
			Collinso		s	lgnal:	ICCID:		
	Lan		Seminus	ta a	н	RCRIVIIII			

#### 3.3. Network Configuration

#### 1、SIM 4G: Configure APN parameters

"Network -> Cellular Network" interface as shown in the figure. Once configured, click

"apply" to activate immediately—no reboot required.

WukongEdge	C Overview	[·] Edge Computing [·] System M	lanagement	8 maa
etwork Switchi		* Detection Interface:	SIM18cSIM2 ~	
Ilular		* Detection Interval:	10 s	
/ireless Client		* Max Ping Tries	4	
thernet Port		* Ping Timeout	5 s	
WAN		* Ping Server1:	119.29.29.29	
LAN		Ping Server2:	8.8.8.8	
Routing				
/PN	SIM Card			
Diagnostics	SIM1 (external card)	l.		
Firewall		APN:	Please enter	
		Username:	Please enter	
		Password:		
		* Auth Method:	NONE 🗸	
		* Network Type:	Auto 🗸	
		PIN Code:		
	SIM2 (Built-in card)			
		* Network Type:	Auto ~	
V1 2 01				

2、 **WiFi Network:** "Network -> Wireless Client" interface as shown in the figure.

Click "Search AP" to display the input box for a dropdown. Choose directly or search by name. Once configured, click "apply" to activate immediately—no reboot required.

<b>WukongEdge</b>	[·] Overview	[·] Network	Edge Computing	😯 System Management	S Santa	iadmin
Network Switchi	> Wireless Clie	nt				
Cellular	Wireless Cli	ient				
Wireless Client	* Enable Wire	eless Client Enabl		~		
Ethernet Port		* SSID	D .	A Search AP		
WAN		Encountion #E	83.50			
LAN		USR Decemord	AP310i			
Routing		产品:	3B			
VPN	apply	USR	AP			
Diagnostics		料技	ж 1			
Firewall		renzi	. n			
V1.2.01						

#### 3.4. Node-Red Graphical Interface

 Edge Computing -> Edge Mode interface. Select "Node-red + Edge" and click the "Apply" button, then restart the device.

WukongEdge	Overview	💽 Network	[•] Edge Computing	System Management
Wizard	> Edge Mode			
Edge Mode	Edge Mode			
Extension IO	Edge Computing:	Nodered+Edge	~	
IO Module ~				
Data Point	De En	able Graphical Design	n, it can be used normally after the	device restarts 2 minutes.
Configuration m	De	fault username: admir	n, default password: admin	
Protocol	Apply			
Edge Gateway 🛛 🗸				
PLC				

2、Once the device restarts, to "Edge Computing→Edge Mode " and click "Graphical Design".

Login with default credentials (admin/admin) – modify them via the built-in web-page if needed. Proceed to create flows graphically:



#### 3.5. Others

The EG628 integrates the WukongEdge application architecture, including edge computing, network management, built-in configuration, and PLC functionality. For specific functional applications, refer to the WukongEdge User Manual.